FE00395

NOAA FORM 76-35A

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE

DESCRIPTIVE REPORT

Type of Survey SIDE SCAN SONAR

Field No. HE-10-4-94

Registry No. FE-395SS

LOCALITY

State VIRGINIA

General Locality ATLANTIC OCEAN

Sublocality 7.0 NM SE OF CAPE HENRY

19 94

CHIEF OF PARTY
LCDR G. E. WHITE, NOAA

☆U.S. GOV. PRINTING OFFICE: 1987—756-980

PROJS

CPA
12209
12205'A'
12207
12221
12280
12220
12200
13003 n/c

Diagram 1222-5

NOAA FORM 77-28 (11-72)

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

HYDROGRAPHIC TITLE SHEET

REGISTER NO.

FE-395SS

INSTRUCTIONS - The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

FIELD NO.

HE-10-4-94

State VIRGINIA

General locality ~~SOUTHERN CHESAPEAKE BAY~~ ATLANTIC OCEAN

Locality 7.0 NM ~~EAST~~ SE OF CAPE HENRY

Scale 1:10,000 Date of survey 21 APRIL 1994 - 28 APRIL 1994

Instructions dated 01 MARCH 1994 Project No. OPR-E696-HE-94

Vessel NOAA SHIP HECK (EDP 9140)

Chief of party George E. White, LCDR, NOAA

Surveyed by LCDR George E. White, LT Gerd Glang, LTJG Michael Williamson, ENS Larry Krepp ST Kevin Shaver

Soundings taken by echo sounder, ~~[illegible]~~

Graphic record scaled by LTJG Michael Williamson, ENS Larry Krepp, ST Kevin Shaver

Graphic record checked by LTJG Michael Williamson

Protracted by N/A Automated plot by HDAPS (FIELD) ENCAD NOVAJET III (AHB)

Verification by Atlantic Hydrographic ~~Section, N/CG244~~ BRANCH PERSONNEL

Soundings in ~~Meters~~ FEET at ~~MLW~~ MLLW

REMARKS: NOTES IN THE ORIGINAL DESCRIPTIVE REPORT WERE MADE IN RED DURING OFFICE PROCESSING.

Awards/SURF ✓ 9/5/95 SJV

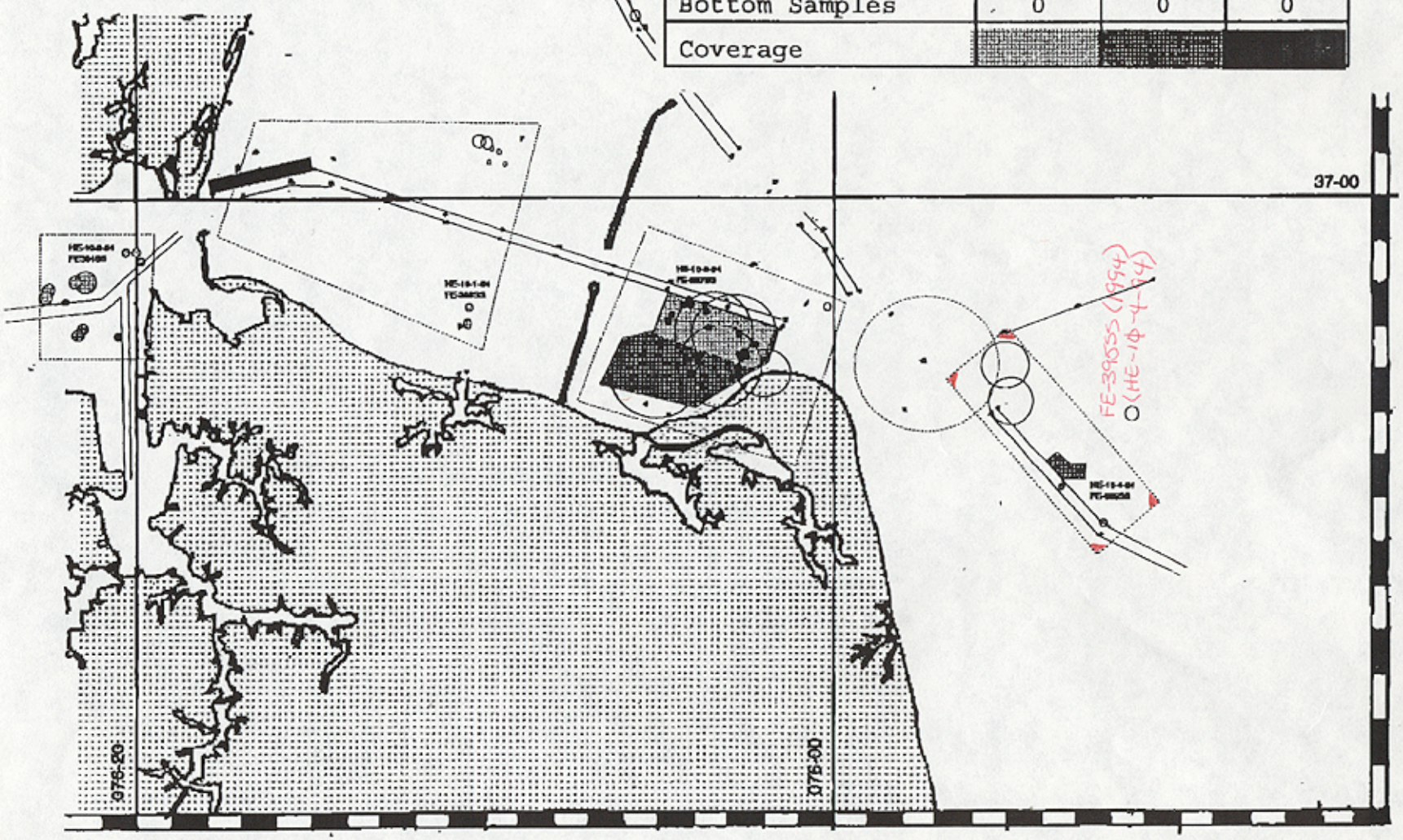
SEP 1 1995 SC

NOAA FORM 77-28 SUPERSEDES FORM C&GS-537.

☆ U.S. GOVERNMENT PRINTING OFFICE: 1978-665-010-1174

Progress Sketch
OPR-E696-HE-94
Southern Chesapeake Bay Item Investigations, VA
NOAA Ship HECK
LCDR George E. White, CMDG
from Chart 12220

	March	April	May
NM Side Scan	94	200	57
NM Hydrography	22	79	8
Velocity Casts	6	6	5
AWOIS Items	4	12	25
Bottom Samples	0	0	0
Coverage			



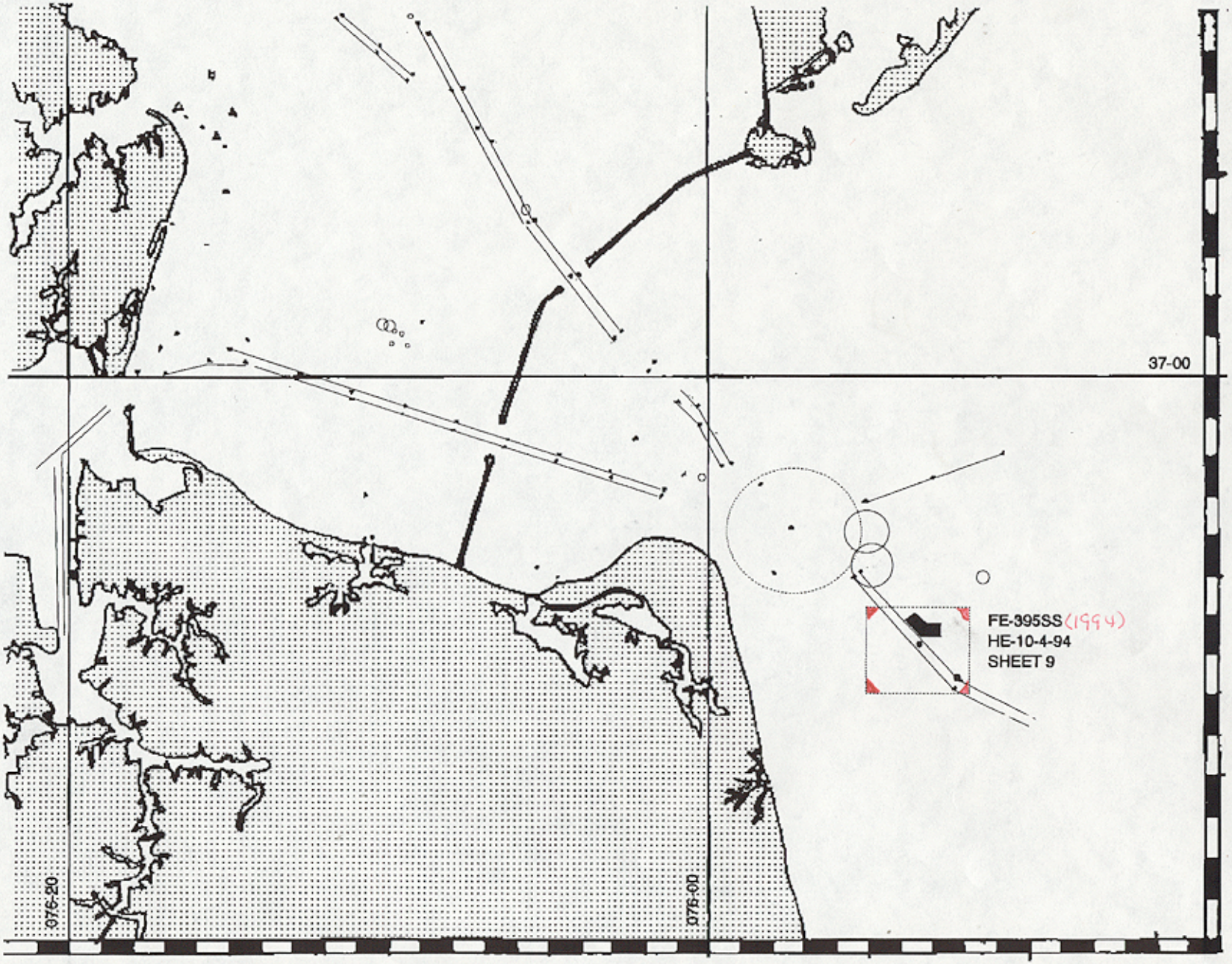

37-00
076-20
076-00
FE-395SS (1994)
HE-10-4-94
SHEET 9

TABLE OF CONTENTS

DESCRIPTIVE REPORT TO ACCOMPANY
SURVEY FE-39588
FIELD NUMBER HE-10-4-94
VIRGINIA
SOUTHERN CHESAPEAKE BAY
Scale 1:10,000
NOAA SHIP HECK S-591
LCDR George E. White, NOAA, CMDG.

A. PROJECT

1. This survey was conducted in accordance with Hydrographic Project Instructions OPR-E696-HE, Southern Chesapeake Bay Item Investigations, Virginia.

2. Original project Instructions are dated March 1, 1994.

3. There have been no changes made to the Project Instructions.

4. This sheet has been designated as Sheet "D".

5. The purpose of this project is to investigate numerous wrecks and obstructions charted in the lower Chesapeake Bay and Approaches. These hazards are hindering the movement of commercial shipping and accurate information regarding these items is considered important to efficient and safe navigation.

B. AREA SURVEYED

1. The survey area, designated as AWOIS items 8152 and 8279 in the Project Instructions, and the grounding site of the integrated tug and barge PHILADELPHIA lie in the Southeastern Approach to Chesapeake Bay.

2. The limits of the AWOIS areas are as follows:

AWOIS NUMBER	CENTER	RADIUS
8152	36°51′51.24" N 075°50′53.05" W	200 m
8279	36°52′27.08" N 075°52′21.42" W	200 m

The approximate survey limits of the grounding site are formed by connecting the following points (in order) by a straight line:

	Latitude	Longitude
Grounding Site	36°54′40.00"	075°53′00.00"
	36°~~53′36.00"~~ 54′10.00"	075°52′30.00"
	36°53′36.00"	075°51′30.00"
	36°52′36.00"	075°51′30.00"
	36°52′36.00"	075°52′30.00"
	36°53′30.00"	075°53′00.00"

3. Survey operations began on April 21, 1994 (DOY 111), and were completed on April 28, 1994 (DOY 118).

C. SURVEY VESSELS

1. All hydrographic and side scan data were collected by NOAA Ship HECK (EDP 9140). All offset and layback information is contained in the offset table located in section IV of the separates.*

2. No unusual vessel configurations were used.

D. AUTOMATED DATA ACQUISITION AND PROCESSING

1. Survey data acquisition and processing were accomplished utilizing HDAPS hardware and the latest version of the NAVITRONIC NAVISOFT 300 software provided to the ship by N/CG24. A listing of actual programs and versions is appended in Appendix VI.*

2. Program Velocity (version 2.00) was used to determine velocity corrections.

3. No nonstandard automated acquisition or processing methods were used.

* DATA FILED WITH FIELD RECORDS.

E. SONAR EQUIPMENT

1. HECK is equipped with an EG&G model 260 slant range corrected Side Scan Sonar (SSS) recorder and model 272 single frequency towfish. Serial numbers and dates of usage are as follows:

Towfish (S/N 016697)	DOY 111 - 118
Recorder (S/N 0012105)	DOY 111 - 118

2. The beam width and down angle are not adjustable on this unit. The grazing angle dip switches are normally set to 01, unless otherwise noted on the sonargram.

3. All SSS data was collected using 100 Khz frequency.

4. a. Line spacing of 160 meters on the 100 meter scale and 110 meters on the 75 meter scale were used to maintain the required line overlap as determined by the equation in FPM 7.3.2.2.

b. Confidence checks were obtained, and annotated on the sonargrams, by towing the side scan unit either past known items or linear bottom features. A minimum of two confidence checks were obtained on a daily basis as required.

c. Required proof of sonar coverage is demonstrated through sonar coverage plots produced as HDAPS plots. Quality of bottom coverage to the outer edges of the sonargrams was assured during check scanning to the best of the hydrographers ability.

d. No anomalies were observed.

e. The towfish was deployed from the stern. All offset and layback information is provided in the offset table located in section IV of the separates.*

5. No contacts required investigation using side scan sonar developments or diver/echosounder investigations in this survey.

6. The sonar contact list (Side Scan Sonar Manual 3.1.1.1.) is provided through the HECK's side scan survey contact abstract table and the automated HDAPS contact printout that is produced during the computation and logging of contacts. Depths on HDAPS contact printout are raw, however, depths on the side scan survey contact list are manually corrected for draft (+2.1 meters). Both are located in the separates.*

*DATA FILED WITH FIELD RECORDS.

No contacts were found during this survey. Therefore, no contact tables were produced during this survey.

Annotations required by section 2.6 of the Side Scan Sonar manual (ship's speed, ship's head, weather/sea state) are on the sonargrams. This information is located in the digital records and can be examined in the "Depth/Position Edit" sub-routine of the Post-Survey routine. Weather information is in the weather logs found in Appendix VI. DATA FILED WITH FIELD RECORDS.

F. SOUNDING EQUIPMENT

1. The following Raytheon DSF-6000N echosounder was used during this survey:

S/N A111N DOY 111 - 118

2. No dives were conducted as part of this survey. The pneumogauge was therefore not used.

3. There were no equipment faults that affected the accuracy or quality of sounding data.

4. Both low and high frequency depths were digitized, but only high frequency depths were plotted. On DOY 118, the DSF recorder was set to High + Low; Low frequency digitized, as opposed to High frequency digitized. This did not impair the quality of the data in any way.

G. CORRECTIONS TO ECHOSOUNDINGS

1. a.1. The following table shows dates and locations of velocity casts conducted using the ODOM Digibar sound velocimeter (S/N 168):

TABLE	DATE	LOCATION	
10	04/21/94 (DOY 111)	36°52'27"N	075°52'23"W
12	04/28/94 (DOY 118)	36°52'22"N	075°52'06"W

The velocity cast data were reduced and velocity corrections calculated using program VELOCITY version 2.00.

The Digibar was checked on February 8, 1994, by ODOM and found to be functioning correctly. Field checks using the prescribed fresh water method were accomplished prior to each cast and recorded on the velocity cast form.

b. There are no variations in the instrument initial on the DSF-6000N.

c. There are no instrument correctors on the DSF-6000N.

d. On DOY 154 (1994) a dual leadline comparison was conducted. A mean difference of 0.04 meter was obtained resulting in a corrector of 0.0 meter.

e. The computed velocity correctors were applied on line to echosounder depths (both high and low frequency) by entering the correction data into the HDAPS sound velocity table.

f. The static draft of 2.10 meters was applied on line to all echosoundings via the HDAPS offset table.

g. Settlement and squat values for NOAAS HECK were determined on March 03, 1993 in the vicinity of Craney Island fuel pier in Norfolk, Virginia using the level rod method. These correctors are on file at N/CG244 and are included in separates section IV.*

Settlement and squat values were applied on line to hydrographic soundings via the HDAPS offset table located in section IV of the separates.*

h. Heave is mesured by a Datawell B.V. (S/N 19110-C) heave, roll, and pitch sensor (HIPPY) located midships near the transducer. The sensor gathers on line data which is applied to the soundings in near real time. All data have been corrected by applying HIPPY correctors.

2. No unusual methods or instruments for determination of correction to soundings were used.

3. No zoning or special correctors were used.

4. The pneumogauge was not used during the course of this survey.

5. There were no unusual factors affecting DSF records other than that mentioned in F.4.

6. a. The tidal datum for this survey was mean lower low water (MLLW). The tide station at Chesapeake Bay Bridge Tunnel, VA (863-8863) was the reference station. Bracketing levels were run by N/OES213 for the Chesapeake Bay Bridge Tunnel. This station is automated and monitored by N/OES213. The tide station

* DATA FILED WITH FIELD RECORDS

at Hampton Roads, VA (863-8610) was the backup tide station. An opening and closing level run was conducted by HECK crew. No tide stations were established by HECK in support of this survey.

b. All hydrographic depths have been corrected for predicted tides. Zone correctors were specified in the project instructions. Tidal correctors were applied on line via the HDAPS predicted tide table. APPROVED TIDES AND ZONING WERE APPLIED DURING OFFICE PROCESSING.

c. Zoning was in accordance with project instructions. The zones, along with time and height correctors, are as follows:

In the Atlantic Ocean, at the entrance to Chesapeake Bay, east of a line between points 36°51.7'N, 075°58.7'W and 37°06.7'N, 075°55.0'W, south of 37°00.0'N, and north of 36°50.0'N.

Apply a -30 minute time correction and a x1.28 range ratio to predicted tides at CBBT.

H. CONTROL STATIONS SEE ALSO SECTION H. OF THE EVALUATION REPORT.

1. The horizontal datum for this project is the North American Datum of 1983 (NAD 83).

2. Horizontal control was accomplished using GPS in conjunction with the DGPS beacons at Cape Henry, VA and Cape Henlopen, DE.

3. Coast Guard DGPS beacons were positioned by N/CG241. All control stations were positioned to Third order, Class 1 standards.

4. No horizontal control stations were installed or maintained by HECK.

5. No horizontal control report has been submitted to NOAA Atlantic Hydrographic Section, N/CG244.

6. No known anomolies or unconventional methods of horizontal control were used.

I. HYDROGRAPHIC POSITION CONTROL

1. Position control was by Differential Global Positioning System (DGPS). Control station positions were entered into the HDAPS control station Table. The first, and most commonly used, was the Cape Henry beacon (289kHz). The Cape Henlopen beacon (298 kHz) was also used for performance checks and occasionally for primary positioning. The list

of the DGPS beacons and there positions appear in Appendix III, LIST OF HORIZONTAL CONTROL STATIONS submitted with this survey. DATA APPENDED TO THIS REPORT.

2. Accuracy requirements were met as specified by the Hydrographic Manual and Field Procedures Manual.

3. Equipment serial numbers appear as part of the header information on each day's data print out. The GPS receivers on board are Ashtech OEM sensors. The differential receivers are Magnavox MX50R receivers. The serial number for DGPS receiver 1 is 079. The serial number for DGPS rceiver 2 is 077.

4. The DGPS beacons used for this survey were the USCG beacons located at Cape Henry, VA (289 kHz) and Cape Henlopen, DE (298 kHz).

5. Performance checks using both DGPS positions (Cape Henry and Cape Henlopen) were conducted using the SHIPDIM program. These checks compare positions computed by both DGPS beacons and compare their subsequent position differences. The performance checks were sent to Atlantic Hydrographic Section N/CG244 as part of the data.

6. When Differential GPS was used, the maximum allowable HDOP was set at 3.75 for the Cape Henry beacon and 3.0 for the Cape Henlopen beacon to avoid EPE's in excess of the allowable 15 meters for this scale survey. Data not meeting these requirements were examined and either accepted, smoothed or rejected.

7. a. No unusual methods of operating or calibrating electronic equipment were used.

b. There were no significant problems with receiving the DGPS signal from either the Cape Henry or Cape Henlopen beacon.

c. No unusual atmospheric conditions were noted and did not effect our reception of the DGPS signals.

d. The positioning accuacy using the DGPS beacons was not compromised at all during the survey.

e. No systematic errors were discovered.

f. and g. All survey offsets were applied on-line using the HDAPS Offset Table 1.

J. SHORELINE

Not applicable as per project instructions.

K. CROSSLINES

1. The second and fourth 100% of the sonar coverage was run perpendicular to the first and third 100% for AWOIS item 2555 and 7522 which made running additional crosslines unnecessary for these items. 3.5 miles of crosslines were run for the grounding area, representing 6.8% of all hydrography for this items.

2. Comparison to mainscheme soundings showed good agreement with random differences of ± 0.2 meters.

3. No significant discrepancies were noted.

4. No sounding equipment changes were made between the running of crosslines and mainscheme.

L. JUNCTIONS

Not applicable as per Project Instructions (section 6.9).

M. COMPARISON WITH PRIOR SURVEYS

The Atlantic Hyrographic Section HECK processing team is completing survey comparisons as agreed upon at the start of this project.

N. ITEM INVESTIGATION REPORTS

N1. SUMMARY OF ITEMS INVESTIGATED

AWOIS NO. TGT #	SECTION	STATUS	RECOMMENDATION
8152	N2	Disproved	Delete Wreck
8279	N3	Disproved	Delete Obstruction
GROUNDING ITEM	N4	Disproved	No Change

N2. AWOIS ITEM 8152

1. Area of Investigation

Reported Position:
Latitude: 36°51′51.24" N
Longitude: 075°50′53.05" W
Datum: NAD 83
Depth: 35 feet
Feature: Wreck

2. Description of Item

This item is listed as a 35′ wreck-like structure near buoy R′~~10~~ 8 of the southeast Approach to Chesapeake Bay Channel, in the inbound lane. This item was reportedly removed by the USCG in 1990 but not properly documented.

3. Survey Requirements

Survey requirements specify determining the existence of this item through 400% side scan coverage over a 200 meter radius.

4. Method of Investigation

400% side scan coverage was completed on April 28, 1994 (DOY 118).

5. Results of Investigation

The item was not found. No significant contacts were found within the AWOIS circle limits.

6. Comparison with Prior Survey

No significant differences were found between the present survey and prior surveys.

7. Comparison with the Chart and charting Recommendations

This item is currently shown on chart #12221 (1:80,000, 62nd Ed., Dec. 93). No significant differences were observed between charted soundings and survey soundings.

Recommendation: Delete Wreck (35 feet) from chart at Latitude 36°51′51.24" N, Longitude 075°50′53.05" W. CONCUR

N3. AWOIS ITEM 8279

1. Area of Investigation

Reported Position:
Latitude: 36°52′27.08" N
Longitude: 075°52′21.42" W
Datum: NAD 83
Depth: 51 feet
Feature: Obstruction

2. Description of Item

This item is listed as an obstruction, and lies within the deepwater channel of the Southeastern Approach to Chesapeake

Bay. The USCG removed a spool of steel cable on May 24, 1993, but was not properly documented.

3. Survey Requirements

Survey requirements specify determining the existence of this item through 400% side scan coverage over a 200 meter radius.

4. Method of Investigation

400% side scan coverage was completed on April 28, 1994 (DOY 118).

5. Results of Investigation

This item was not found. No other significant items were found within the survey limits.

6. Comparison with Prior Survey

No significant differences were found between the present survey and prior surveys.

7. Comparison with the Chart and charting Recommendations

This item is currently shown on chart #12221 (1:80,000, 62nd Ed., Dec. 93) as a 51 foot obstruction and on chart #12205 (1:80,000, 22nd Ed., Apr. 92) as a 50 foot obstruction. No significant differences were observed between charted soundings and survey soundings.

Recommendation: Delete Obstruction (51 feet) from the chart at Latitude 36°52'27.08" N, Longitude 075°52'21.42" W. CONCUR

N4 GROUNDING INVESTIGATION

1. Area of Investigation

Reported Position:
Latitude: 36°53'06.00"
Longitude: 075°52'00.00"
Datum: NAD 83
Depth: N/A
Feature: Grounding

2. Description of Item

This item is a reported grounding of the integrated tug and barge PHILADELPHIA with a 39' draft. The grounding was reported to USCG Fifth District on March 31, 1994. The

District Marine Safety Office requested HECK investigate the site to resolve any possible uncharted shoaling.

3. Survey Requirements

Survey requirements specify determining if the nearby shoal has shifted south into the inbound route of the southeast Approach to Chesapeake Bay through an echosounder development and 100% side scan coverage. The area developed by echosounder shall be expanded to the west and north until the 36 foot contour is outside the inbound route. The original search area is a rectangle 1.0 nm x 0.8 nm around the reported position.

4. Method of Investigation

100% side scan coverage was completed on April 21, 1994 (DOY 111). The side scan sonar lines were split and an echosounder development was conducted on April 26, 1994, (DOY 116) along these splits, resulting in 55 meter line spacing. Crosslines were run on April 28, 1994 (DOY 118). In addition, the echosounder development was extended to define the 36′ contour along the inbound approach.

5. Results of Investigation

No movement of the shoal has been found.*

6. Comparison with Prior Survey

The nearby shoal does not appear to have moved. Results compare favorably with the chart and the most recent NOAA SHIP WHITING survey.

7. Comparison with the Chart and charting Recommendations

This item is currently shown on chart #12221 (1:80,000, 62nd Ed., Dec. 93). No significant differences were observed between charted soundings and survey soundings.

Recommendation: No change to the chart is recommended.*

0. COMPARISON WITH THE CHART

1. The Atlantic Hyrographic Section HECK processing team is completing comparisons with current editions of the following NOS charts as agreed upon at the start of this project:

* DO NOT CONCUR- THE SHOAL HAS MIGRATED APPROXIMATELY 125m SOUTHWEST INTO THE INBOUND TRAFFIC SEPERATION SCHEME LANE. CHART AREA AS SHOWN ON THE PRESENT SURVEY.

CHART	EDITION	DATE	SCALE
12205 SC	22nd	APR 92	1:80,000
12221	62nd	DEC 93	1:80,000

2. No Dangerto Navigation reports have been submitted during the course of this survey. SEE SECTION O. OF THE EVALUATION REPORT.

3. a. The charted soundings are consistent with the survey depths.

b. No shoaling or deepening has been observed. The depths from this survey should replace all prior depths in the area. DO NOT CONCUR - SEE SECTION N4.7., PAGE 11 OF THIS REPORT.

f. No extraordinary hydrographic features were noted.

g and h. The deepwater route of the southeast approach to Chesapeake bay falls within the survey area. The depths found are consistent with the charted depths.

4. There are no non-sounding features other than those mentioned in Section N in this survey.

5. No changes are recommended to scale coverage or format of published charts within the survey area.

P. ADEQUACY OF SURVEY - SEE ALSO SECTION P. OF THE EVALUATION REPORT.

1. This survey meets or exceeds 1:10,000 specifications, and is adequate to supersede all prior surveys for the purposes of charting the depths and hazards to navigation within the survey area.

2. No portion of this survey has been identified as substandard or incomplete.

Q. AIDS TO NAVIGATION

1. No correspondence was initiated with the Coast Guard regarding floating aids to navigation.

2. Buoys G"7", R"8", G"9", R"10", G"11" and R"12" were located within the survey area. Detached positions were not taken, but their location observed while on-line (in some cases used as confidence checks) coincided well with the charted positions. These buoys are closely maintained on station by the USCG.

3. There were no aids to navigation not shown in the Light List noted in the survey area.

4. No bridges or overhead cables are close to the survey area.

5. No submarine cables, submarine pipelines, or ferry routes were noted.

6. There are no uncharted ferry terminals within this survey area.

R. STATISTICS

ITEM	AMOUNT
a. Square NM Hydrography	1.3 NMi^2
b. Days of Production	3 Days
c. Detached Positions	0
d. Bottom Samples	0
e. Tide Stations Established	None
f. Current Stations Established	None
g. Velocity Casts Performed	2 Casts
h. Magnetic Stations Established	None
i. XBT Drops	None

S. MISCELLANEOUS - SEE ALSO SECTION S. OF THE EVALUATION REPORT.

1. a. No unusual silting conditions were observed in the survey area.

b. No unusual submarine features were noted.

c. No unusual tide conditions were observed.

d. No current observations were made. no unusual current conditions were observed.

e. No magnetic anomalies were noted.

2. No bottom samples were taken during the course of this survey as per project instructions.

T. RECOMMENDATIONS - SEE ALSO SECTION P. OF THE EVALUATION REPORT.

1. No additional field work is recommended.

2. No salvage or dredging operations operations should interfere with the results of this survey.

3. No further investigation of unusual features or sea conditions is recommended.

U. REFERRAL TO REPORTS

1. User Evaluation Reports were submitted to N/CG241 and N/CG244.

2. A Coast Pilot Report will be submitted to N/CG244 and N/CG222 by August 1994.

3. No LORAN-C chart verification was conducted as part of this survey since no detached positions were taken.

SUBMISSION

Respectfully Submitted,

Michael Williamson

Michael Williamson, LT(jg), NOAA
Operations Officer
NOAA Ship HECK

CONTROL STATIONS as of 1 JUL 1994

NO	LATITUDE	LONGITUDE	MM/DD/YY	STATION NAME
1	36:55:36.00	76:00:24.00	03/03/94	CAPE HENRY DGPS STATION
2	38:46:36.00	75:05:18.00	03/03/94	CAPE HENLOPEN DGPS STATION

LETTER OF APPROVAL

Field operations contributing to the accomplishment of this survey were conducted under my direct supervision with daily personal checks of progress and data quality. This report, field sheets, and data records have been closely reviewed and are complete and adequate for charting.

George E. White, LCDR, NOAA
Commanding Officer
NOAA Ship HECK

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
Office of Ocean and Earth Sciences
Silver Spring, Maryland 20910

TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE: August 22, 1994

MARINE CENTER: Atlantic

HYDROGRAPHIC PROJECT: OPR-E696-HE

HYDROGRAPHIC SHEET: FE-395SS

LOCALITY: Virginia, Southern Chesapeake Bay

TIME PERIOD: April 21 - 28, 1994

TIDE STATION USED: 863-8863 Chesapeake Bay Bridge Tunnel, Va.
Lat. 36° 58.0'N Lon. 76° 06.8'W

PLANE OF REFERENCE (MEAN LOWER LOW WATER): 24.88 ft.
HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 2.7 ft.

REMARKS: RECOMMENDED ZONING

Apply a -30 minute time correction and a x1.28 range Ratio to Chesapeake Bay Bridge Tunnel, Va. (863-8863).

Notes:
1. Times are tabulated in Greenwich Mean Time.
2. The data is temporarily stored in file #663-8863.

William M. Hubbard

CHIEF, DATUMS SECTION

NOAA FORM 76-155
(11-72)

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

GEOGRAPHIC NAMES

SURVEY NUMBER

FE-395 SS

Name on Survey	A ON CHART NO. 12221	B ON PREVIOUS SURVEY NO.	C ON U.S. QUADRANGLE MAPS	D FROM LOCAL INFORMATION	E ON LOCAL MAPS	F P.O. GUIDE OR MAP	G RAND MCNALLY ATLAS	H U.S. LIGHT LIST	K	
CHESAPEAKE BAY (title)	X									1
HENRY, CAPE (title)	X									2
VIRGINIA (title)	X									3
										4
										5
										6
										7
										8
										9
										10
										11
										12
										13
										14
										15
				Approved:						16
										17
				Charles O. Hutchens						18
				Chief Geographer - N/CG25						19
				SEP 16 1994						20
										21
										22
										23
										24
										25

NOAA FORM 76-155 SUPERSEDES C&GS 197

NOAA FORM 61-29
(12-71)

U. S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

REFERENCE NO.

N/CS33-31-95

LETTER TRANSMITTING DATA

DATA AS LISTED BELOW WERE FORWARDED TO YOU BY *(Check)*:

☐ ORDINARY MAIL ☐ AIR MAIL

☐ REGISTERED MAIL ☒ EXPRESS

☐ GBL *(Give number)* _____

TO:

Chief, Data Control Section, N/CS3x1
NOAA/National Ocean Service
Station 6813, SSMC3
1315 East-West Highway
Silver Spring, Maryland 20910

DATE FORWARDED

29 AUG 1995

NUMBER OF PACKAGES

ONE TUBE

NOTE: A separate transmittal letter is to be used for each type of data, as tidal data, seismology, geomagnetism, etc. State the number of packages and include an executed copy of the transmittal letter in each package. In addition the original and one copy of the letter should be sent under separate cover. The copy will be returned as a receipt. This form should not be used for correspondence or transmitting accounting documents.

FE-395SS

VIRGINIA, CHESAPEAKE BAY, 7 NM SOUTHEAST OF CAPE HENRY

1 TUBE:
1 SMOOTH SHEET
1 ORIGINAL DESCRIPTIVE REPORT

FROM: *(Signature)*

Deborah A. Bland Deborah A. Bland

RECEIVED THE ABOVE
(Name, Division, Date)

Return receipted copy to:

Atlantic Hydrographic Branch
N/CS33
439 West York Street
Norfolk, VA 23510-1114

NOAA FORM 61-29 SUPERSEDES FORM C & GS 413 WHICH MAY BE USED. *U.S.GPO:1983-0-664-006/1192

ATLANTIC HYDROGRAPHIC BRANCH
EVALUATION REPORT FOR FE-395SS (1994)

This Evaluation Report has been written to supplement and/or clarify the original Descriptive Report. Sections in this report refer to the corresponding sections of the Descriptive Report.

H. CONTROL STATIONS

7. Horizontal control used for this survey during data acquisition is based upon the North American Datum of 1983 (NAD 83). Office processing of this survey is based on these values.

To place this survey on the North American Datum of 1927 (NAD 27) move the projection lines 0.536 seconds (16.527 meters or 1.65 mm at the scale of the survey) north in latitude, and 1.272 seconds (31.499 meters or 3.15 mm at the scale of the survey) east in longitude.

O. COMPARISON WITH CHART 12205 (23rd Edition, Apr. 30/94)
12207 (19th Edition, Mar. 4/95)
12208 (5th Edition, Mar. 12/94)

The hydrographer makes adequate chart comparisons in sections N. and O. of the Descriptive Report.

Dangers to Navigation

One Danger to Navigation report was submitted to Commander (oan), Fifth Coast Guard District, Portsmouth, Virginia during office processing. A copy of the notice is appended to the Descriptive Report.

The present survey is adequate to supersede the charted hydrography within the common area.

P. ADEQUACY OF SURVEY

This is an adequate side scan sonar survey; no additional work is recommended.

S. MISCELLANEOUS

Chart compilation using the present survey was done by Atlantic Hydrographic Branch personnel in Norfolk, Virginia. Compilation data has been forwarded to Marine Chart Division.

HECK PROCESSING TEAM

Douglas V. Mason
Cartographic Technician

Deborah A. Bland
Cartographer

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
Coast and Geodetic Survey
Norfolk, Virginia 23510-1114

DECEMBER 23, 1994

Commander, Fifth Coast Guard District
Aids To Navigation Office
431 Crawford Street
Portsmouth, VA 23704-5004

Dear Sir,

The following submerged feature was discovered during hydrographic operations conducted by the NOAA Ship HECK.

Hydrographic Survey Registry Number....FE-395
State.....Virginia
General Locality.....Chesapeake Bay
Locality.....7.0 NM SE of Cape Henry
Project Number.....OPR-E696
Surveyed by.....NOAA Ship HECK

Description of Item

Minor shoaling was discovered in the Chesapeake Bay southeasterly approach inbound traffic lane in the vicinity of buoys R"10" and R"12." The shoaling does not affect the deep water route. The following depths should be added to the affected charts:

Add Depths in Feet Mean Lower Low Water	Position (1993 North American) Latitude		Longitude	
38	36/53/51.65	N	75/52/44.92	W
37	36/53/31.10	N	75/52/20.43	W
39	36/53/11.38	N	75/51/58.35	W
36	36/53/14.67	N	75/51/31.39	W

Affected Nautical Charts:

CHART NUMBER	EDITION NUMBER	DATE	HORIZONTAL DATUM	SCALE
12205SC	23	APR30/94	NAD83	1:40,000/1:80,000
12207	18	JUN 20/92	NAD83	1:80,000
12208	5	MAR 12/94	NAD83	1:50,000
12221	62	DEC 11/93	NAD83	1:80,000

Mariners should be alert to the fact that depths less than 40 feet exist at the outer (eastern) extreme of the inbound traffic lane.

Questions concerning this report should be directed to the Atlantic Hydrographic Section, by calling 804-441-6746.

Sincerely,

Nicholas E. Perugini

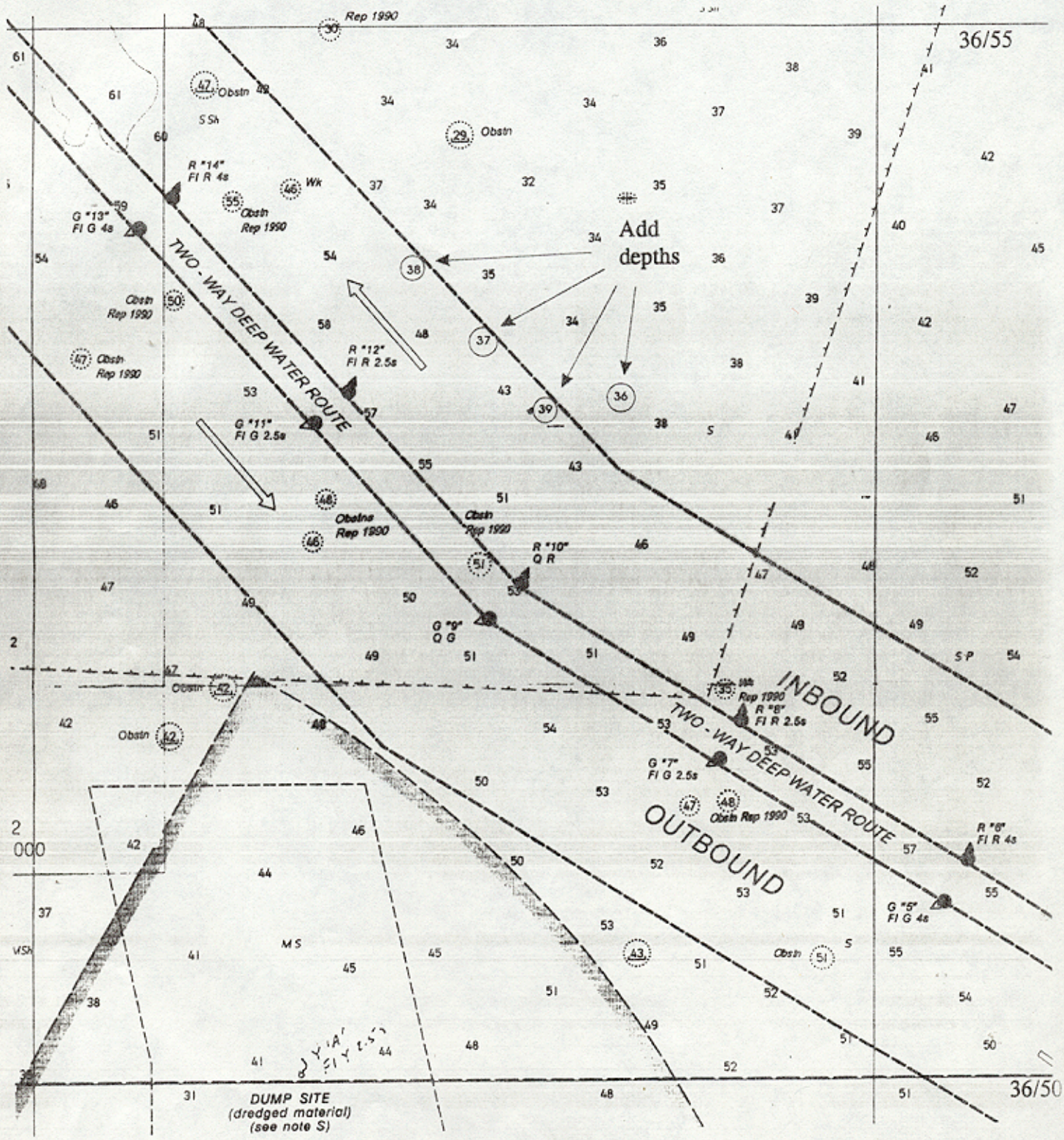
Nicholas E. Perugini, CDR,NOAA
Chief, Atlantic Hydrographic Section

Enclosure

Chart 12208

Approaches to Chesapeake Bay
5th Ed., Mar 12, 94
75/55 1:50,000 (chartlet copy not to scale) New depths are circled

Preliminary Data Subject to Office Review
Depths in Feet at Mean Lower Low Water
North American Datum of 1983
75/50



Surveyed by NOAA Ship Heck
April, 1994

Plotted by Atlantic Hydrographic Section, NOAA
439 W. York Street
Norfolk, VA 23510

APPROVAL SHEET
FE-395SS

Initial Approvals:

The completed survey has been inspected with regard to survey coverage, delineation of depth curves, development of critical depths, cartographic symbolization, and verification or disproval of charted data. The digital data have been completed and all revisions and additions made to the smooth sheet during survey processing have been entered in the magnetic tape record for this survey. Final control, position, and sounding printouts of the survey have been made. The survey records and digital data comply with NOS requirements except where noted in the Evaluation Report.

Date: 28 AUG 95

Norris A. Wike
Cartographer
Atlantic Hydrographic Branch

I have reviewed the smooth sheet, accompanying data, and reports. This survey and accompanying digital data meet or exceed NOS requirements and standards for products in support of nautical charting except where noted in the Evaluation Report.

Date: 28 Aug 95

Nicholas E. Perugini
Commander, NOAA
Chief, Atlantic Hydrographic Branch

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Final Approval:

Approved: Date: 8/31/95

Andrew A. Armstrong, III
Captain, NOAA
Chief, Hydrographic Surveys Division

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO FE-395 SS

INSTRUCTIONS

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart.
1. Letter all information.
2. In "Remarks" column cross out words that do not apply.
3. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.

CHART	DATE	CARTOGRAPHER	REMARKS
12221	8/18/95	D.A. Bland	Full ~~Part Before~~ After Marine Center Approval Signed Via
			Drawing No.
12208	9/13/95	Dan Glass	Full ~~Part Before~~ After Marine Center Approval Signed Via
			Drawing No. 13
12205A	9/13/95	Dan Glass	Full ~~Part Before~~ After Marine Center Approval Signed Via
			Drawing No. 24
12221	9/13/95	Dan Glass	Full ~~Part Before~~ After Marine Center Approval Signed Via
			Drawing No. 91
12207	9/14/95	Dan Glass	Full Part Before After Marine Center Approval Signed Via
			Drawing No. 28
12280	5/14/96	M. Hetrick	Full Part Before After Marine Center Approval Signed Via
			Drawing No. Previously Applied, (No Corr.)
12200	6/27/96	Frank L Powers	Full ~~Part Before~~ After Marine Center Approval Signed Via
			Drawing No. 56
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.

SUPERSEDES C&GS FORM 8352 WHICH MAY BE USED